

ABSTRACT

A short-range transaction system enables a user to conduct transactions with a self-service terminal in a user-friendly environment without using currency. The user carries a portable smart card, which interacts with a mobile phone. After authentication via an RFID connection, the device MAC address and a security key (K) are imprinted in the card. In operation, the user waves the smart card past the self-service terminal and activates an RFID connection. The terminal sends the card a random number. The card returns the MAC address and a result (RES) computed using the hash value and the security key. The terminal using the MAC address and security key establishes a secure connection with the device. The terminal downloads the user's transaction interface from the device and displays the user interface at the self-service terminal. The user completes a transaction at the terminal via the user interface.